AMERICAN GILSONITE COMPANY

BONANZA MINES
BONANZA, UTAH

SEPTEMBER 19, 1979

Mr. Jackson W. Loffit, Area Mining Engineer
United States Geological Survey, Conservation Division
8426 Federal Building
125 South State Street
Salt Lake City, Utah 84138

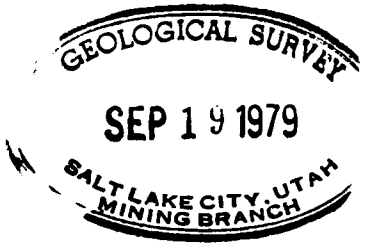
RE: [illegible]

Dear Mr. Loffit:

Please accept the enclosed plan and revised surface maps in our application for mining on Federal lease U-[illegible]. I believe that the discrepancies outlined in your letter of September 4, 1979, have been addressed in this revised plan.

The cross-section maps submitted on August 27, 1979, have not been modified, so no copies have been supplied with this letter. Please retain the original copies for your files.

If you have any further questions or require any additional information with regard to this or any other lease, feel free to give me a call. (801) 789-1



Very truly yours,

Richard E. Carlbert

Richard E. Carlbert
Asst. Mine Engineer

ENCL.
5 copies of Mining Plan, 4 pages each
5 copies Surface Map, #1
5 copies Surface Map, #2

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PROPOSED MINING PLAN FOR THE BONANZA GILSONITE VEIN

FEDERAL LEASE U-0126940

GENERAL

Lease U-0126940 is located in the NE¼ and the N½, NW¼ Section 17, T9S, R24E, approximately three miles northwest of Bonanza, Utah.

Total relief of this lease is not over 250 feet, with the lowest portion (5140 feet above sea level) on the northeastern border and the highest point (5323 feet above sea level) on the eastern border. Landforms within the lease area consist of a flat elevated terrace to the west which has been eroded to steep walled canyons grading into a gently sloping basin. Drainage is toward the northeast into coyote wash.

The plant life in the lease area consists of sparse amounts of sagebrush, saltbush, and greasewood. Rabbitgrass, prickly pear cactus, and range grasses are minor components located within the boundries of the lease.

Animal life in the lease area is relatively scarce due to a lack of perennial streams and springs. Those observed and noted included antelope, rabbit, coyote, hawk, owl, mice, and various species of lizard.

The lease is accessible by a road passing south of the vein. It will be necessary to construct roads from this main road to each proposed mine site. At B-44, however, access to the site will be obtained by extending the road from B-42. Requirements of electrical power would be supplied by extending the existing line onto the lease and to each proposed mine site.

SURFACE FACILITIES

In preparing the surface at each mine site, grading and levelin would be necessary. However, this would be done in a conservative manner in order that surface disturbance be minimized. Topsoil overlaying each mine site will be carefully stockpiled. Site preparation may require using a cut and fill type construction. Each location will be graded such that run-off water is directed toward the closest wash and grades kept low to prevent surface erosion. Due to the low annual rainfall, surface erosion is not expected to be a problem.

At each mine site located on this lease, mine surface facilitie

would consist of a derrick having a 20 x 20 foot base and a height of 77 feet including a storage bin on one side; a hoist house with a 20 x 15 foot base, located approximately 100 feet from the derrick; a timberyard occupying not over 2500 square feet; and a compressor (usually housed in a building occupying a space no larger than 200 square feet) having an external receiving tank. Conduit and piping would run along (or under) the ground between the hoist house, compressor, and derrick. Additional surface facilities may include a booster fan installation to aid in the transport of ore to the surface. Also, latrine facilities will be provided at each site.

Electrical power to each mine site would be supplied by extending the line northwest from B-42.

Primary access roads would be a maximum of 30 feet wide, including drainage ditches. Secondary access roads of the mine sites would be approximately 12 feet wide. Dip type crossings will be used at all washes and intermittent streams in order to assure that siltation and the accumulation of debris be avoided. All roads would be constructed providing for drainage and with a grade not exceeding eight percent.

It is expected that groundwater will be encountered in the mining of this lease. This water will be pumped to the surface and discharged into natural drainage in accordance with EPA regulations. Ponding may be required prior to discharge. Additionally, boreholes may be drilled to the vein bottom in advance of mining to aid in mine dewatering.

Ore losses will be controlled through the use of bag house type dust collectors on the airlift systems. Ore is hauled from the mines in covered trucks and losses in loading will be minimized through use of socks or loading chutes on the bins.

Federal mine regulations concerning the location of all structures, flammable materials, and vegetative growth surrounding or near each mine opening will be followed. Regulations relating to matches, smoking materials, or other ignition sources will also be strictly adhered to.

Hazards to public health and safety will be prevented by fencing off shaft areas and covering openings, using reinforced concrete caps. Should surface pillars be removed, the exposed trench would be closed using proper blasting methods.

MINING METHODS

The gilsonite vein through the lease area strikes N67W with a dip of 2^{0}S and ranges in width from eight inches at the surface to thirty six inches at a depth of 500 feet at the eastern boundary of the lease. Outcrops of the vein are minimal across the lease, and widths of two to four inches are typical where outcrops are found. No drilling has been done to determine vein width at depth, but it is assumed that a width of about three feet can be expected in most mining areas.

Mining will be performed utilizing a method of open stoping having timbered floors spaced at thirty foot intervals (top floor six feet below the surface or barrier pillar) in panels having the approximate dimension of 450 x 300 feet.

Spacing of the proposed mines has been planned to allow balanced mining as well as optimum mine site locations. The center to center distance on shafts is given below:

B-44 to B-46	840 feet
B-46 to B-48	800 feet
B-48 to B-50	805 feet
B-50 to B-52	820 feet
B-52 to B-54	840 feet
B-54 to B-56	850 feet

Surface pillars are anticipated and will have a minimum thickness of 35 feet.

Equipment required in the mining operations consists of hand operated pneumatic rock picks used to break the gilsonite ore from the face. The ore is then gravity fed down to the bottom of the slope. From there, the ore is transported to a storage bin on the surface pneumatically using an airlift. Under some circumstances, a slusher is required to transport the broken ore to the shaft where it is hoisted to the surface in a skip.

Each mine will utilize a crew of four men, consisting of two miners, one chute puller, and one hoistman. Currently, only one shift per day is anticipated. Since mining will be done sequentially across the lease, no increase in manpower is anticipated. Mine life will range from five to six years per mine under normal conditions.

MINING SEQUENCE

Mining will proceed at B-44 shortly after approval of this plan and proceed toward B-56. It is planned for one mine to be in production at one time while a second is in a stage of development. The availability of equipment, sale of ore, and mining conditions encountered will generally determine the rate of mining.

From B-40, mining experience has disclosed that the vein narrows considerable at 850 feet. Thus, the vein can only be worked down to a depth of 850 feet below the surface.

In setting up a mine to go on line, development usually requires a period of fourteen months. This is based upon the time necessary to construct the surface facilities, sink a shaft, and develop an escapeway.

RECLAMATION

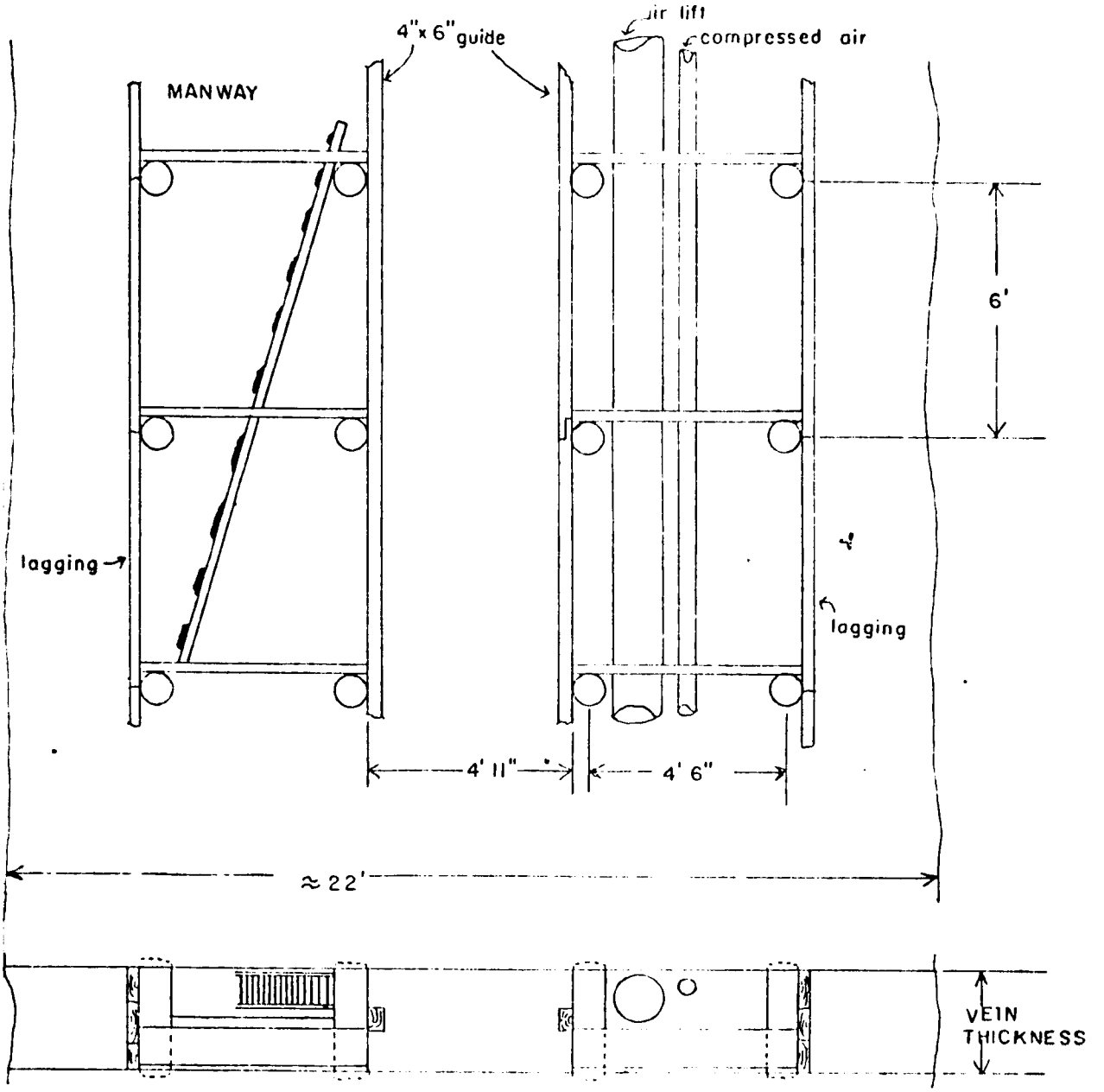
Upon entering each respective mine site, topsoil will be carefully stockpiled. At the end of each mine's life all surface facilities and scrap will be removed from the mine site within

a two month period. Disturbed areas will be recontoured to match the surrounding terrain and designed to control erosion during the regrowth period. The type or species of vegetation to be replanted will be determined in accordance with recommendations from the BLM in order to assure the best possible results.

Shafts, ventilation holes, and escapeways will be sealed with a reinforced concrete slab. The top of the slab will be level with the surface of the natural ground as possible. Each slab will be a minimum of 12 inches thick. Revegetation will be carried out in conjunction with the BLM to assure best possible results for this area.

ARCHEOLOGICAL

From the archeological survey performed on this lease in May of 1977, it was determined that development would pose little threat to archeological resources and thus would be considered to be negligible. Both vein and access roads have been investigated and cleared with the understanding that if antiquities are discovered in the course of development, the BLM Vernal office and the USGS Salt Lake City office will be notified.



SHAFT TIMBERING TECHNIQUE

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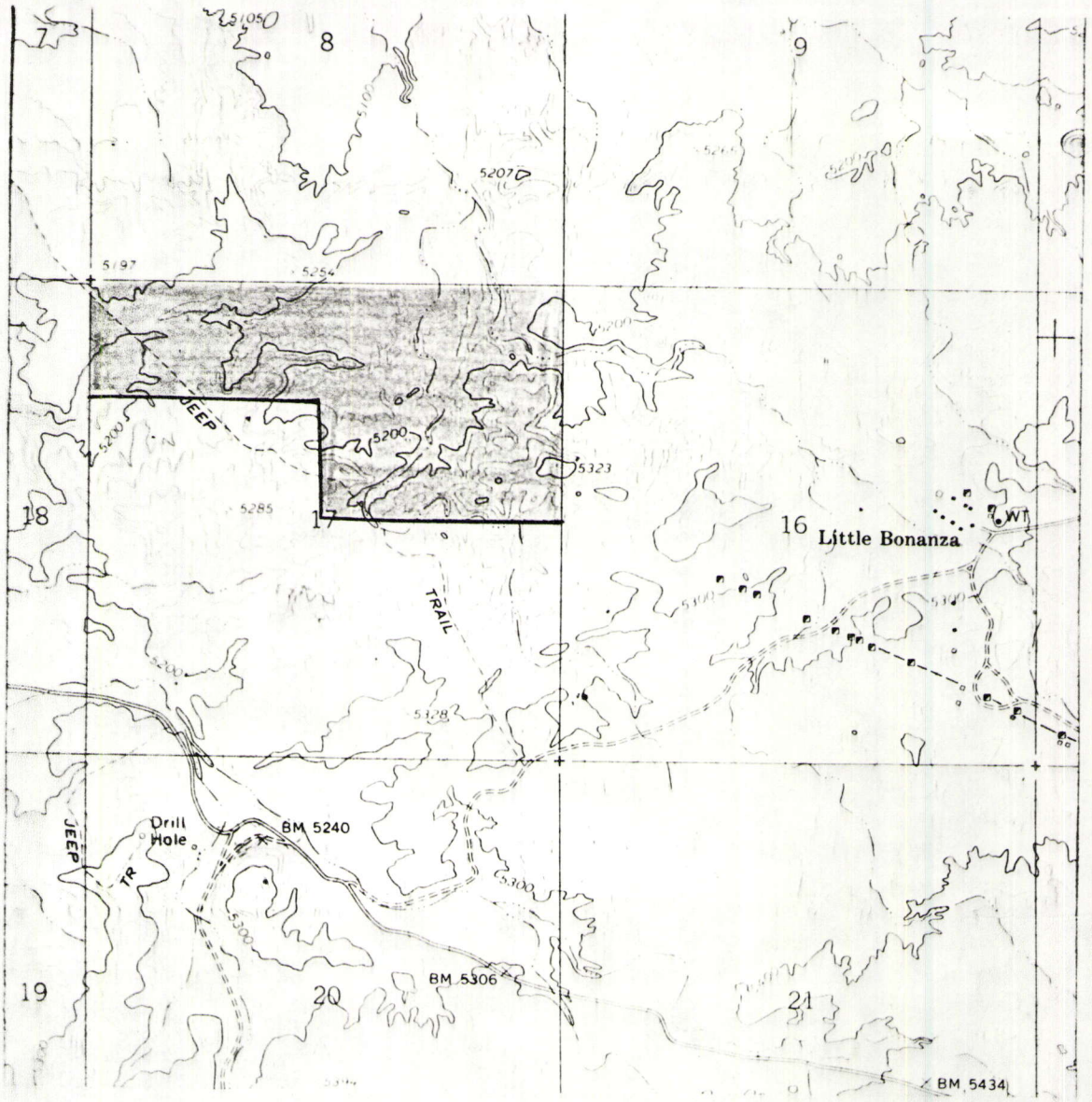

MAP SHOWING LEASE LOCATION ON THE

USGS TOPOGRAPHIC SERIES, 7.5 MINUTE SERIES

BONANZA QUADRANGLE, UTAH - UINTAH CO.